

mainly devoted to maize) on steep slopes. Palm Crows were tame, allowing approach to within 20 m.

The call was a rather sharp and high-pitched cawing *craa-craa-craa-*, repeated with series of up to 6 of the *craa-* notes. In tone the call was more similar to that of the Fish Crow *Corvus ossifragus* or American Crow *C. brachyrhynchos* than to calls of the Carrion Crow *C. corone* (*contra* Bond 1971), but not closely similar to any of these. They called loudly and often, the group of c. 20 producing a babble of loud cawing from the tree tops.

A peculiar 'tail-flicking' movement was seen repeatedly. This is apparently not mentioned in the literature, despite its being quite different to displays that I have seen or found described for other *Corvus* species. The tail was slowly raised to slightly above horizontal and then sharply flicked down to a position where it pointed downwards about 45° below the horizontal. The wing tips were held slightly lowered throughout. The 'tail-flicks' were seen to be given at short intervals during a long bout of cawing (but not in time with the calls) as well as by birds that did not call. They appear to function as flight-intention or self-assertive movements.

One crow was seen to head-scratch indirectly (by raising the foot over a lowered wing) in the usual manner for Corvidae.

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A record of Whitehead's Swiftlet *Collocalia whiteheadi* from Bougainville Island

by S. Dillon Ripley

Received 4 October 1982

Among a collection of birds made by Bruce Beehler and Don Hadden from the Crown Prince Range, Bougainville Island is a specimen of *Collocalia whiteheadi* which has not been recorded previously from this island.

The specimen was collected 15 km SSW of Arawa, North Solomons Province (Bougainville Island), Papua New Guinea (6° 20'S, 155° 20'E) at c. 1200 m on 17 June 1979, and was prepared as a study skin. The bird was sexed as a male, testis 2 x 1 mm. It was taken in a mist-net set in the forest; in this same series of nets Beehler and Hadden took *Collocalia spodiopygia* and *C. vanikorensis*. *C. esculenta* was also common at the locality. *C. whiteheadi* is easily distinguished from these other species by its larger size.

A number of populations of large, dull-coloured swiftlets occur in the New Guinea region. A recent analysis by Somadikarta (1967) showed that one population, collected from several localities on the northern watershed of western New Guinea, differs from all others in having but 3 toes. Three populations of large, 4-toed swiftlets have been named in Melanesia: *nuditarsus*, from the southern watershed of central and southeastern New

Guinea (Salomonsen 1962); *leletensis*, from the Lelet Plateau, New Ireland (Salomonsen 1962); and *orientalis*, from Guadalcanal, Solomon Islands (Mayr 1935).

The single 4-toed specimen from Bougainville obtained by Beehler and Hadden differs in minor ways from its 2 neighbour populations (each represented in collections by holotypes only). The Bougainville bird's wing length (130 mm) is intermediate between *leletensis* (134 mm) and *orientalis* (127 mm). The Bougainville specimen shows a dorsal colouration that is browner than either neighbouring population; in addition, the Bougainville bird's rump is only obscurely paler than the rest of its upperparts, whereas the rump colour is pale, creating a noticeable rump patch, in both *orientalis* and *leletensis*. Finally, the Bougainville specimen is generally darker below than either *orientalis* or *leletensis*. While these differences, listed as they are above, seem significant, comparison is based on a single specimen from each island population. Thus, to erect a new subspecies for the unique Bougainville specimen would be unwarranted.

The 3 named populations of large 4-toed swiftlets in the New Guinea region have been variously referred to the following species taxa: *lowi*, *maxima*, *nuditarsus*, *orientalis*, and *whiteheadi*. Interpopulational variation is ill-defined, and available specimens for study are very few. The New Ireland, Bougainville, and Guadalcanal populations are each known from unique specimens. Clearly more material is needed, including additional information on the habits of the birds, before a final decision can be made as to which population should be assigned to which species. My examination of the types of *orientalis*, *nuditarsus*, and *papuensis*, as well as the Bougainville specimen, would seem to indicate that the Melanesian populations should be classified into 2 species populations: that of the 3-toed *papuensis*, and that of the 4-toed *whiteheadi* (*orientalis*, *nuditarsus*, *leletensis*, and the Bougainville population).

C. whiteheadi was described from material taken in the Philippines. Comparison of this material with specimens from Melanesia shows very little consistent difference between populations. Because of minor physical differences, and because of the absence of populations from several intermediate islands between New Guinea and the Philippines, Somadikarta (1967) favoured considering the Melanesian populations as specifically distinct from *whiteheadi*. Given the paucity of comparative material, I believe this specific separation is not justified.

These taxonomic judgements create a distributional picture that is unusual, but not unique to Melanesian birds. The 3-toed *papuensis* is the large swiftlet of the northern watershed of New Guinea. The 4-toed populations occur in the islands to the north (New Ireland, Bougainville, and Guadalcanal) and on the southern watershed of New Guinea—separated by the intervening population of *papuensis*. This distribution is not unlike that of the Paradise Kingfisher *Tanyiptera sylvia*, which occurs in northern Queensland and several scattered locales on the southern watershed of New Guinea, then again in the Bismarck Archipelago, but is absent from the main section of New Guinea's northern watershed.

Acknowledgements. I am indebted to Lester L. Short, American Museum of Natural History, for allowing me to examine specimens in his care. The Wildlife Division, Papua New Guinea, allowed Beehler and Hadden to collect birds on Bougainville Island, and we are grateful for their permission. Specimens from that field-trip are housed at the Smithsonian Institution and Papua New Guinea National Museum.

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The distribution of the races of *Arremon aurantiirostris* (Emberizinae) in Panama

by Storrs L. Olson

Received 27 October 1982

Although 3 subspecies of the Orange-billed Sparrow *Arremon aurantiirostris* are recognized in Panama, the characters and distribution of 2 of these have been inaccurately represented in the literature. The dark race *A. a. rufidorsalis* Cassin, 1865 (type locality, Turrialba, Costa Rica), of the Caribbean slope of Middle America extends into northwestern Panama in Bocas del Toro and requires no further comment. The nominate subspecies *A. a. aurantiirostris* Lafresnaye, 1847 (type locality "Panama"), is usually stated to range from the Pacific slope of Costa Rica east in Panama to the former Canal Zone (e.g. Hellmayr 1938, Paynter 1970). A third subspecies, *A. a. strictocollaris* Todd, 1922 (type locality, "Sautata" = Saotata, lower Río Atrato, Chocó, Colombia), has been considered to range from extreme eastern Panama into the adjacent parts of Chocó, in northwestern Colombia (Hellmayr 1938, Paynter 1970). These ranges imply a gap in the distribution of the species that does not in fact exist. Furthermore, although Todd (1922) characterized *A. a. strictocollaris* as having a more yellowish green dorsum, a narrower black pectoral band, and lighter underparts than *A. a. aurantiirostris*, none of these characters actually holds.

Chapman (1925) and Hellmayr (1938) incorrectly regarded *A. a. strictocollaris* as being intermediate between *A. a. aurantiirostris* and the South American subspecies, such as *A. a. occidentalis* and *A. a. erythrorhynchus*, which have a narrower black pectoral band. In the series of specimens from northwestern Colombia and from most of Panama that I have examined, the pectoral band was quite variable in width and it may also be considerably affected by the manner of preparation of the skin. The pectoral band in the holotype of *A. a. strictocollaris*, which I examined at the Carnegie Museum of Natural History, falls within the range of variation of *A. a. aurantiirostris* and thus does not approach the South American subspecies in this respect. In addition (*contra* Todd 1922), the dorsum of *A. a. strictocollaris* is *not* more yellowish green than in *A. a. aurantiirostris*—in fact, the opposite is true—nor are the purported differences in colour of the underparts of the 2 subspecies apparent to me.

Thus, although weakly differentiated from *A. a. aurantiirostris*, *A. a. strictocollaris* may nevertheless be distinguished by (1) the decidedly orange-yellow rather than yellow coloration of the bend of the wing and (2) the slightly darker, more olivaceous dorsum. The broad-banded forms *A. a.*